

AMENDMENT

Please amend the application without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

In the Claims

1-2. (Cancelled)

3. (Allowed) An isolated antibacterial protein having the amino acid sequence of SEQ ID NO: 3.

4. (Cancelled)

5. (Currently amended) [[A]] The protein as claimed in claim 3, wherein the protein ~~any one of claims 1-4 which is bacteriocidal.~~

6. (Currently amended) [[A]] The protein as claimed in claim 5, wherein the protein ~~which is bacteriocidal with respect to *Streptococcus pyogenes*.~~

7. (Currently amended) An antibacterial composition comprising the ~~which includes~~ a protein as claimed in claim 3 ~~any one of claims 1 to 6~~ or an organism which ~~can express~~ expresses [[a]] the protein as claimed in claim 3 ~~any one of claims 1 to 6~~.

8. (Currently amended) A therapeutic formulation which comprises:

(i) [[a]] the protein as claimed in claim 3 ~~any one of claims 1-6~~; or

(ii) an organism which ~~can express~~ expresses [[a]] the protein as claimed in claim 3 ~~any one of claims 1 to 6~~,

in combination with a diluent, carrier and/or excipient.

9-10. (Cancelled)

11. (Currently amended) [[A]] The therapeutic formulation as claimed in claim 8, any one of claims 8-10 which is an orally administrable medicament.

12. (Currently amended) A medicament The therapeutic formulation as claimed in claim 11, wherein the medicament ~~which~~ is a syrup, mouthwash, gargle, toothpaste or mouth spray.

13. (Currently amended) A medicament The therapeutic formulation as claimed in claim 11, wherein the medicament ~~which~~ is in a unit dosage form.

14. (Currently amended) ~~A medicament~~ The therapeutic formulation as claimed in claim 12, wherein the medicament which is a lozenge or capsule containing a unit dose of an organism which can express a protein as claimed in any one of claims 1-6.

15. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 8 any one of claims 8-11 in which said protein or organism is included in a food or drink.

16. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 15 in which said food or drink is a dairy product based food or drink.

17. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 16 in which said protein or organism is included in milk powder, milk biscuits, milk, yoghurt or cheese.

18. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 16 in which said protein or organism is included in a flavoured milk.

19. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 8, any one of claims 8-10 in which said protein or organism is included in a confectionery.

20. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 19 in which said confectionery is a chewing gum.

21. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 8, any one of claims 9-20 which further comprises one or more secondary antibacterial agents.

22. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 21 in which said secondary antibacterial agent(s) are selected from bacteriocin-like inhibitory substance(s) (BLIS).

23. (Currently amended) [[A]]The therapeutic formulation as claimed in claim 20 which includes one or more both of Salivaricin A, [[an]] a microorganism which ~~can express~~ Salivaricin A, ~~the an~~ antibacterial protein which has the amino acid sequence of SEQ ID NO:5, or [[an]] microorganism which ~~can express~~ the antibacterial protein which has the amino acid sequence of SEQ ID NO:5.

24-26. (Cancelled)

27. (Currently amended) ~~An~~ A microorganism, in substantially pure form, comprising ~~which includes~~ a polynucleotide which:

- a) ~~—~~ encodes [[a]] the protein as claimed in claim 3 any one of claims 1-6;
- b) ~~—~~ ~~comprises the coding sequence of SEQ ID NO:2; or~~

e) ~~encodes a protein as claimed in any one of claims 1-6, comprising the DNA sequence which encodes an antibacterial protein as claimed in claim 1, which is part of the genome of *S. salivarius* strain K12, on deposit at Deutsche Sammlung von Mikroorganismen Und Zellkulturen GmbH, Braunschweig, Germany, accession number DSM 13084.~~

28. (Currently amended) [[An]] The organism as claimed in claim 27 in which said polynucleotide is heterologous.

29. (Currently amended) [[An]] The organism as claimed in claim 27 which is a *S. salivarius* organism.

30. (Original) A biologically pure culture of *S. salivarius* strain K12 on deposit at Deutsche Sammlung von Mikroorganismen Und Zellkulturen GmbH, Braunschweig, Germany, accession number DSM 13084.

31. (Original) A biologically pure culture of *S. salivarius* strain K30 on deposit at Deutsche Sammlung von Mikroorganismen Und Zellkulturen GmbH, Braunschweig, Germany, accession number DSM 13085.

32. (Original) A therapeutic formulation which includes *S. salivarius* strain K12 or *S. salivarius* strain K30 as identified in claim 30 or claim 31.

33. (Currently amended) A method of treating an individual to at least inhibit growth of harmful streptococcal bacteria in the upper respiratory tract, comprising the step of administering an effective amount of a protein as claimed in claim 3 any one of claims 1-6 orally to said individual.

34-46. (Cancelled)